



## **7. GLOSSARY**

### Glossary

**Absorption**—The uptake of water or dissolved chemicals by a cell or an organism. The movement of a chemical into or across a tissue.

**Accumulation**—The buildup of a chemical in the body due to long-term or repeated exposure.

**Acute**—Characterized by a time period that is relatively short in comparison to the life span of an organism. Acute toxicity is the characteristic of a chemical to cause a toxic response in organisms immediately or shortly after exposure to the chemical.

**Adsorption**—The process by which chemicals are held on a solid surface, especially soil particles.

**Alternative**—One of several policies, plans, or projects under evaluation. The decision-maker(s) eventually select(s) one of the alternatives for implementation.

**Anadromous Fish**—Fish that are hatched and rear in freshwater, move to the ocean to grow and mature, and return to freshwater to reproduce. Salmon and steelhead are examples.

**Basal stem application**—Application of a herbicide to basal regions of plant.

**Bedload**—Sand, silt and gravel, or soil and rock debris rolled along the bottom of a stream by moving water.

**Best Management Practices (BMP)**—Methods, measurements, or practices designed to prevent or reduce water pollution. Not limited to structural and non-structural controls, and procedures for operations and maintenance. Usually, BMPs are applied as a system or practices rather than a single practice.

**Bioaccumulation**—Net uptake of a chemical into the tissues of an organism as a result of direct contact with a medium, such as water or soil, or through the diet. Movement of a substance such as a herbicide from the surrounding environment (abiotic) into living organisms.

**Biodegradation**—The decomposition of a chemical substance by natural biological processes.

**Broad spectrum herbicide**—A herbicide which kills a wide range of pest species, as opposed to a herbicide which kills a single or limited number of species.

**Broadcast application**—The application of a material such as a herbicide to the entire surface of an area.

**Buffer**—An administratively defined area established along a stream, lake, wetland, or erosion hazard to provide protection for aquatic resources during land use activities.

**California Ad Valorem Tax**—Laws of the State of California define how local governments may tax commercial forest lands. The State annually adopts new assessment rates based on the productivity of the soils and the ease of harvesting timber on the property. In addition, state laws limit the tax rate to 1 percent of the assessed value of the land. To qualify for the relatively low tax rate, commercial forest land property must be designated as Timber Production Zone by local government land use zoning ordinances. The property owner subsequently pays the local county tax assessor. State publishes standardized rates per acre of commercial timberland and the counties collect at a rate of 1 percent of the total assessed value. Distributed to all county's taxing governments.

**California Sales Tax**—California levies a sales tax of 6 percent on all retail sales in the state. In addition to the state levy, local government jurisdictions, cities and counties, may levy additional sales tax. Humboldt County levies an additional 1.25 percent. All tax revenues are collected by the state government and dispersed back to the local government.

**California Timber Yield Tax**—The California Timber Yield Tax is a 2.9 percent tax on the value of harvested timber. The Timber Tax Division of the California Board of Equalization sets annual value assessment rates and distributes approximately 90 percent of the revenue to the county where the harvesting occurred.

**Certified applicator**—A person who has been trained and certified as a herbicide applicator by a state agency which has been authorized to do so by EPA.

**Chronic**—Characterized by a time period that represents a substantial portion of the life span of an organism (e.g., chronic toxicity is the characteristic of a chemical to produce a toxic response when an organism is exposed over a long period of time).

**Class I Stream**—This is a fish-bearing stream.

**Class II Stream**—This is a non-fish-bearing stream.

**Class III Stream**—This is a stream with no aquatic life.

**Class IV Stream**—This is a manmade watercourse, usually downstream; it is an established domestic, agricultural, hydroelectric supply, or other beneficial use.

**CMZ**—Channel migration zone is the area over which a stream would be expected to change channel position over many years.

**Concentration**—The amount of a chemical substance expressed relative to the amount of environmental medium (for example, µg/L [micrograms of chemical per liter of water] or mg/kg [milligrams of chemical per kilogram of soil]).

**Debris Flow**—A rapid moving mass of rock fragments, soil, and mud with more than half the particles being larger than sand size.

**Diameter at breast height (dbh)**—The diameter of a tree at breast height, measured at 4.5 feet above the ground, in inches or centimeters. Size classes are based on average dbh of trees in a stand.

**Direct Job**—Direct jobs are those jobs that would be immediately affected by changes in the local or regional economy. For example, the closure of a manufacturing plant would result in the loss of jobs for workers that had been employed at the plant.

Distance zone—Divisions of a viewed landscape by foreground, middleground, and background zones.

- Foreground—Portion of viewed area from immediately adjacent to the viewing position to about one-half mile from the observer's position; individual branches of trees are discernible.
- Middleground—The visible terrain beyond the foreground from about one-half mile to approximately 3 miles from the observer's position; individual trees are visible but do not stand out distinctly from the landscape.
- Background—The distant part of a landscape; the seen or viewed area located from approximately 3 miles to infinity from the viewer.

Dose—A measure of exposure. Dose is often expressed in milligrams per kilogram (mg/kg) or parts per million (ppm).

Dose-Response—The determination of the relation between the magnitude of exposure and the probability of occurrence of the health effects in question. For example, a few sleeping pills (a small dose) may cause drowsiness; the whole bottle (a large dose) may cause coma or death.

Ditch Relief Culvert—A drainage structure or facility which will move water from an inside road ditch to an outside area.

EBAI—Equivalent Buffer Area Index; a index rating the functionality of a riparian management zone for a specific habitat-related parameter or process, such as sediment filtration.

Economic Sector—One of the 10 major industry groupings that comprise the business activities in the economy of an area. These sectors are agriculture, mining, construction, manufacturing, transportation and utilities, wholesale trade, retail trade, finance and insurance and real estate, services, and government.

Economic Sector—One of the 10 major industry groupings that comprise the business activities in the economy of a geographic area. These sectors are agriculture, mining, construction, manufacturing, transportation and utilities, wholesale trade, retail trade, finance and insurance and real estate, services, and government. Each sector and the subgroupings under each sector are assigned a unique code, the Standard Industrial Classification, by the Federal Office of Management and Budget.

Endangered Species—A native species found by the Secretary of the Interior to be threatened with extinction.

EEZ—The area where heavy equipment associated with timber operations is totally excluded for the protection of water quality, the beneficial uses of water, and/or the protection of other forest resources.

ELZ—The area where heavy equipment associated with timber operations is limited for the protection of water quality, the beneficial uses of water, and/or the protection of other forest resources.

Equivalent buffer area index (EBAI)—See EBAI

Ethnography—A detailed written description of a particular culture.

**Ethnohistory**—The description of past lifeways as described in the historic literature.

**Exposure**—Contact between a human or ecological receptor and a chemical in the environment. Some common routes of exposure are dermal (skin), oral (by mouth) and inhalation (breathing).

**Extirpate**—To totally destroy or exterminate.

**Fate and transport**—A description of how a chemical is carried through the environment. This may include transport through biological as well as physical parts of the environment.

**Federal 25 Percent Fund**—An annual payment to local government road funds and schools based on 25 percent of the value of all revenues collected from timber harvesting and other activities within National Forest System lands. The monies are distributed 50-50 between roads and schools based on the county's share of all lands within the national forest.

**Federal payments in lieu of taxes**—A flat-rate annual payment to counties based on the total acreage of federal lands located in the county.

**Floodplain**—The area adjacent to a stream where the soil surface is temporarily covered with flowing water during floods. A 100-year floodplain is the lowland area bordering a stream onto which the stream spreads at a 100-year flood stage.

**Foliar spray application**—The application of a herbicide directly onto foliage.

**Forest opening**—Areas with grass, brush and conifer seedlings, and saplings up to 1 inch in diameter at 4.5 feet from the ground (dbh).

**Forest Practice Rules (FPRs) - California**—These are the rules used to implement the Z'berg-Nejedly Forest Practices Act of 1973. The provisions of these rules are followed by Registered Professional Foresters in preparing Timber Harvest Plans and by the Director of the California Department of Forestry and Fire Protection in reviewing such plans.

**Forestry Sector**—The forestry sector of the economy is a subgroup under the major sector group agriculture. Jobs in this subsector include those related to the growing, planting, spraying, thinning, and pruning of commercial forestry tree species. In the Standard Industrial Classification system, the forestry sector comprises Subgroup 08 (SIC 08).

**Fragmentation**—The degree to which the landscape is broken into distinct patch types.

**Hack and squirt application**—A method of conifer release and juvenile spacing where the bark of a tree is cut (hack) and herbicides are injected (squirt) to kill the tree.

**Hardwoods**—Areas dominated by broadleaf trees such as tanoak and madrone

**Herbicide**—Any chemical or mixture of chemicals intended to prevent the growth of or promote the removal of targeted trees, bushes, and/or herbaceous vegetation.

**Heritage resource**—Districts, sites, buildings, structures, and objects that contain evidence of past human activities.

**Hibernacula**—Hibernation sites used by bats.

**Historic properties**—Under the NHPA, defined as heritage resources that are already listed in or are found to meet the criteria for listing in the National Register.

**Indirect Jobs**—Indirect jobs are those jobs that would be affected by the increase or decrease of other jobs in the local economy. For example, if a large number of manufacturing jobs were eliminated, the salaries that had been supporting the worker and his or her family members would no longer be available to buy food, clothing, or shelter for these people. This decrease in expendable income in the community could reduce the need for workers in the grocery, retail clothing, or real estate sectors of the local economy. The potential loss of jobs filled by these workers are indirect jobs.

**Inner Gorge**—A stream reach bounded by steep valley walls that terminate upslope into a more gentle topography. Sideslopes must be greater than 55 percent.

**Insecticide**—A class of pesticides used to kill insects.

**Jobs**—The number of employment positions filled by workers in the labor force. A worker may fill one or more jobs.

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**Large Woody Debris (LWD)**—Any large piece of relatively stable woody material having a diameter of at least 10 centimeters and a length greater than 1 meter that intrudes into a stream channel.

**Late seral forest**—Areas with trees that average over 24 inches dbh and have begun developing a multi-storied structure. It occurs in some redwood stands as young as 40 years, but is usually found in stands more than 50 years old. (Late seral includes forests classified under the California wildlife habitat relationships (WHR) system as late-successional types 5M, 5D, and 6.

**Late Successional Habitat**—Forested habitat that has late successional forest conditions. These are forests or stands of trees with structural attributes that support biological communities and processes associated with old-growth and/or mature forests.

**List A**—Species that are or could be listed within the HCP planning period for which “take” authorization is discussed in the HCP and IA, and for which PALCO is currently seeking ITPs.

**List B**—Those species that are or could be listed within the HCP planning period for which take authorization is not initially sought and would be deferred until listing or until an ITP is authorized (requiring an amendment).

**Lumber and Wood Products Sector**—The harvesting and processing of lumber is a subgroup of the manufacturing sector. In the Standard Industrial Classification system, the Lumber and Wood Products Sector comprises Subgroup 24 (SIC 24).

**Lumber and Wood Products Sector**—The Lumber and Wood Products Sector of the economy is a subgroup under the major sector group manufacturing. Jobs in this subsector include those related to the harvesting, milling, and finishing of bulk lumber products such as construction lumber, plywoods, and veneers. In the Standard Industrial Classification system, the Lumber and Wood Products Sector comprises Subgroup 24 (SIC 24).

**Marbled Murrelet Conservation Area (MMCA)**—Areas identified in the proposed HCP that would protect the highest quality marbled murrelet habitat on PALCO lands for the period of the incidental take permit.

**Mass Wasting**—The downslope movements of earth caused by gravity (i.e., without major action of water, wind, or ice). Includes but is not limited to landslides, log dam breaks, rock falls, debris avalanches, and creep. It does not, however, include surface erosion by running water. It may be caused by natural erosional processes, or by natural disturbances (e.g., earthquakes or fire events) or human disturbances (e.g., mining or road construction).

**Mid seral forest**—Areas with trees 12 to 24 inches dbh. Stands are generally 20 to 50 years old and lack a shrub layer.

**Million board feet (mmbf)**—Total harvest volume is measured in millions of board feet.

**Multiplier Effect** —Based on research studies, economists are able to define the ratio between the number of indirect jobs created by the employment on one additional direct worker in different sectors of the economy. In addition, multiplier effects can be calculated between the income of indirect job workers relative to the income of each additional direct job worker.

**National Environmental Policy Act (NEPA)**—An act, passed by Congress in 1969, that declared a national policy to encourage productive harmony between humans and their environment to promote efforts that will prevent or eliminate damage to the environment and the biosphere and stimulate the health and welfare of humans to enrich the understanding of the ecological systems and natural resources important to the nation and to establish a Council on Environmental Quality. This act requires the preparation of environmental impact statements for Federal actions that are determined to be of major significance.

**National Historic Preservation Act (NHPA) of 1966**—Established federal government policy and programs on historic preservation, including the creation of the National Register of Historic Places through which the policy is implemented.

**No Action/No Project Alternative**—The most likely condition expected to exist in the future if current management were to continue unchanged.

**Non-Forest**—Meadows and rocky areas that do not support forest vegetation.

**Non-target plant**—Vegetation which is not expected or not planned to be affected by a herbicide application.

**Old growth**—Technically, these stands are part of the late-successional seral stage but they are listed as a separate stage by PALCO. They generally have multiple canopy layers dominated by trees over 30 inches dbh, with a shrub and herb layer and high snag and down log levels. PALCO only includes unentered stands as old-growth stands. Previously harvested stands with residual old-growth trees are included in the late seral category.

**Persistence**—The ability to last, or survive, in the environment. Environmentally persistent substances (such as DDT and PCBs) are long-lasting; they do not degrade quickly.

**Pesticide**—EPA defines a pesticide as, "... any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant."

**PILT**—See federal payments in lieu of taxes.

**Population Net Increase**—The net increase of population is a function of births, deaths, immigration, and out-migration of people for a particular geopolitical area.

**Pre-emergent herbicide**—Herbicide applied before emergence of weeds.

**Primary Region of Impact**—The geographic area that encompasses communities whose residents are interrelated based on regional expenditure and consumption patterns and would sustain the greatest impacts of a proposed action.

**Priority Species**—For the purpose of the EIS/EIR, these species are those with federal or state status or heightened public awareness or concern, generally due to decline in population distribution.

**Primary Region of Influence**—The geographic area that encompasses the communities whose residents are interrelated based on regional expenditure and consumption patterns and would sustain the greatest impacts of a proposed action.

**Record of Decision (ROD)**—A document, based on information disclosed in the Final Environmental Impact Statement, that identifies the alternative chosen, mitigation and monitoring measures to be implemented, and other information relative to the decision.

**Reference Dose (RfD)**—The RfD is an estimate of a daily exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. The RfD is the amount of daily herbicide exposure over a lifetime the EPA determines will cause no adverse effects. It includes a large safety factor and usually is expressed as milligrams of exposure per kilogram of body weight per day (mg/kg/day).

**Residue**—That quantity of herbicide, its degradation products, and/or its metabolites remaining on or in the soil, plant parts, animal tissues, whole organisms, and surfaces.

**Riparian area or land**—The area including a stream channel, a lake, pond, or wetland, and the adjacent land where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables, and soils that exhibit some wetness characteristics.

**Riparian Management Zone (RMZ)**—As used in this EIS/EIR, the area adjacent to a stream that is managed to maintain both riparian and aquatic functions. Similar to buffer and water course and lake protection zone.

**Rotation**—The number of years required to establish, including the regeneration period, and grow timber crops to a specified condition or maturity for regeneration harvest.

**Sector of the Economy**—The major types of industries that comprise the total range of economic activity. The typical division includes 11 sectors: agriculture-forestry-fishing, mining, construction, manufacturing, transportation, communications-utilities, wholesale trade, retail trade, finance-insurance-real estate, services, and public administration.

**Selective herbicide**—One that kills specific undesirable plants, sparing other desirable plants; this is done through different types of toxic action or by the manner in which the material is used (its formulation, dosage, timing, placement, etc.).

**Seral Stage**—One of several successional stages of plant community development, beginning with an early seral stage, following a major disturbance, and ending with a late-seral stage near or at the climax stage. See succession.

**Silvicultural or Harvest Prescriptions**—The method by which tress are removed from a stand. Includes clearcut, seed tree, shelterwood, single tree/group selection, late seral, and commercial thinning.

**Silviculture**—The practice of growing trees by determining how a stand of trees should be tended, harvested, and regenerated to achieve future stand conditions. Silviculture takes into account the interaction of soils, climate, plant communities, and tree physiology

**Site**—A heritage resource that contains physical manifestations of purposeful prehistoric or historic human activity consisting of: one or more features, with or without artifacts; one or more formal tools found in association with other cultural material; the occurrence of diverse cultural materials in densities beyond the level of one or a few accidentally lost artifacts; or physical manifestations of human activity that, in the professional opinion of an archaeologist are indicative or purposeful human activity.

**State Historic Preservation Officer (SHPO)**—With the Advisory Council on Historic Preservation (ACHP), the state and federal agencies responsible for overseeing the management and protection of heritage resources in compliance with the NHPA.

**Succession**—A series of dynamic changes by which one group of organisms succeeds another through stages leading to potential natural community or climax. An example is the development of different plant communities (called seral stages) following a predictable pattern, after a major disturbance such as fire or clearcutting.

**Successional Stage**—See seral stage.

**Surface erosion**—Movement of soil particles down or across a slope, as a result to gravity and a moving medium such as rain or wind. The transport of sediment depends on the steepness of the slope, the texture and cohesion of the soil particles, the activity of rainsplash, sheetwash, gullyng, and dry ravel processes, and the presence of buffers.

**Systemic**—Affecting the plant generally; distributed throughout the plant.

**Thousand board feet (mbf)**—Total harvest volume is measured in thousands of board feet.

**Thousand-Board-Feet-Net (mbfn)**—Tree or log volume suitable in size and quality to be processed into wood products. For example, this measurement excludes rotten or damaged timber.

**Threatened Species**—A native species likely to become endangered within the foreseeable future.

**Toxic**—Harmful; poisonous.

**Traditional cultural properties**—Specific, definable areas that members of a community or ethnic group associate with a variety of traditional social, religious, and economic activities and that meet the criteria listed in National Register Bulletin No. 38.

**Turbidity**—An indicator of the amount of sediment suspended in water. It has been used as an expression of the optical properties of a sample which causes light rays to be scattered and absorbed rather than transmitted through the sample. Measured in nephelometric turbidity units (NTUs).

**Viewshed**—A defined landscape or panoramic vista seen from one or more specific viewpoints.



Visual Quality Objective (VQO)—Management standards reflecting five degrees of acceptable alteration of the natural landscape based on a landscape's diversity of natural features and the public's concern for scenic quality. Based on U.S. Forest Service methodology.

- Partial Retention—A VQO in which management activities are to remain visually subordinate to the natural landscape.
- Modification—A VQO in which management activities may visually dominate the original characteristic landscape, but resulting visual characteristics must resemble natural occurrences within the surrounding area when viewed from the foreground and middleground distance zones.
- Maximum Modification—A VQO that prescribes that an area may be dominated by management activities, but the resulting visual characteristics should appear as natural occurrences when viewed from the background distance zones.

Water Course and Lake Protection Zone (WLPZ)—Under California Forest Practice Rules, the area adjacent to a stream or lake that is managed to insure the protection of beneficial uses that are derived from the physical form, water quality, and biological characteristics of watercourses (i.e., streams) and lakes.

Water solubility—The maximum concentration of a chemical that dissolves in pure water at a specific temperature and pH.

Watershed—The area of land draining into a stream.

Watershed Analysis—A systematic process to describe current watershed conditions and develop prescriptions to prevent cumulative impacts.

Wetland—Lands where saturation with water is the major factor in determining soil development and the types of plants that grow there.

Wild and Scenic River—Rivers or sections of rivers designated by congressional action under the 1968 Wild and Scenic Rivers Act or by an act of the Legislature of the state or states through which they flow.

Wilderness—Areas designated by congressional action under the 1964 Wilderness Act; undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation.

Young forest—Areas with saplings between 1 and 11 inches dbh. Stands are generally between 10 and 20 years old.